

## **APPENDIX J**

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### Biological Resources Assessment and Plant List

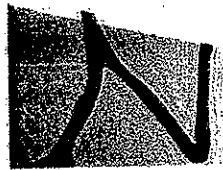
**BIOLOGICAL RESOURCES ASSESSMENT  
FOR THE  
±12.5-ACRE CEDAR GROVE APARTMENTS PROJECT**

**Tahoe Vista, Placer County, California**

*Prepared For:*

**Affordable Housing Development Corp.  
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Clovis, California 93612  
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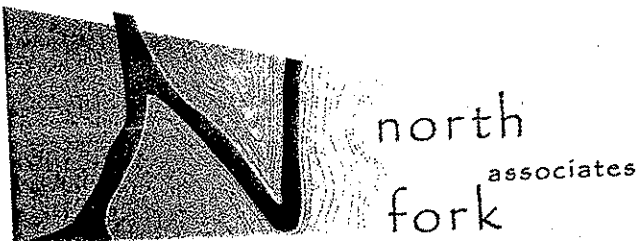
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**November 14, 2002**



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# BIOLOGICAL RESOURCES ASSESSMENT FOR THE ±12.5-ACRE CEDAR GROVE APARTMENTS PROJECT

## INTRODUCTION

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### Setting

The Cedar Grove Apartments project site is situated in the Tahoe Basin in the north shore community of Tahoe Vista. It occupies a 12.5-acre parcel south of the North Tahoe Regional Park and west of Grey Road and Toyon Road. The project site is in Section 12, Township 16 north, Range 17 east on the Kings Beach 7.5-minute USGS quadrangle (Figure 1). Approximate coordinates for the center of the property are: 39°14'41" North and 120°03'06" West.

The dominant vegetation on the project site is montane conifer forest on the east side of the Sierran crest at an elevation of approximately 6350 feet above sea level. It is a little more than 100 feet above the elevation of Lake Tahoe, which is located approximately one-quarter mile to the south. The project site slopes gently from north to south and is surrounded by other residential and commercial developments in Tahoe Vista (Figure 2). The property is used by adjacent local residences and others passing through the area as it contains many paths, debris, and "structures," such as tree houses.

### Project Description

The proposed project consists of 24 buildings housing apartment complexes, clubhouses, or other facilities. Roads, parking lots, utility lines, storm water detention basins, and other infrastructure are also part of the project. The purpose of the project is to create additional affordable housing in the north Lake Tahoe area.

### Objectives

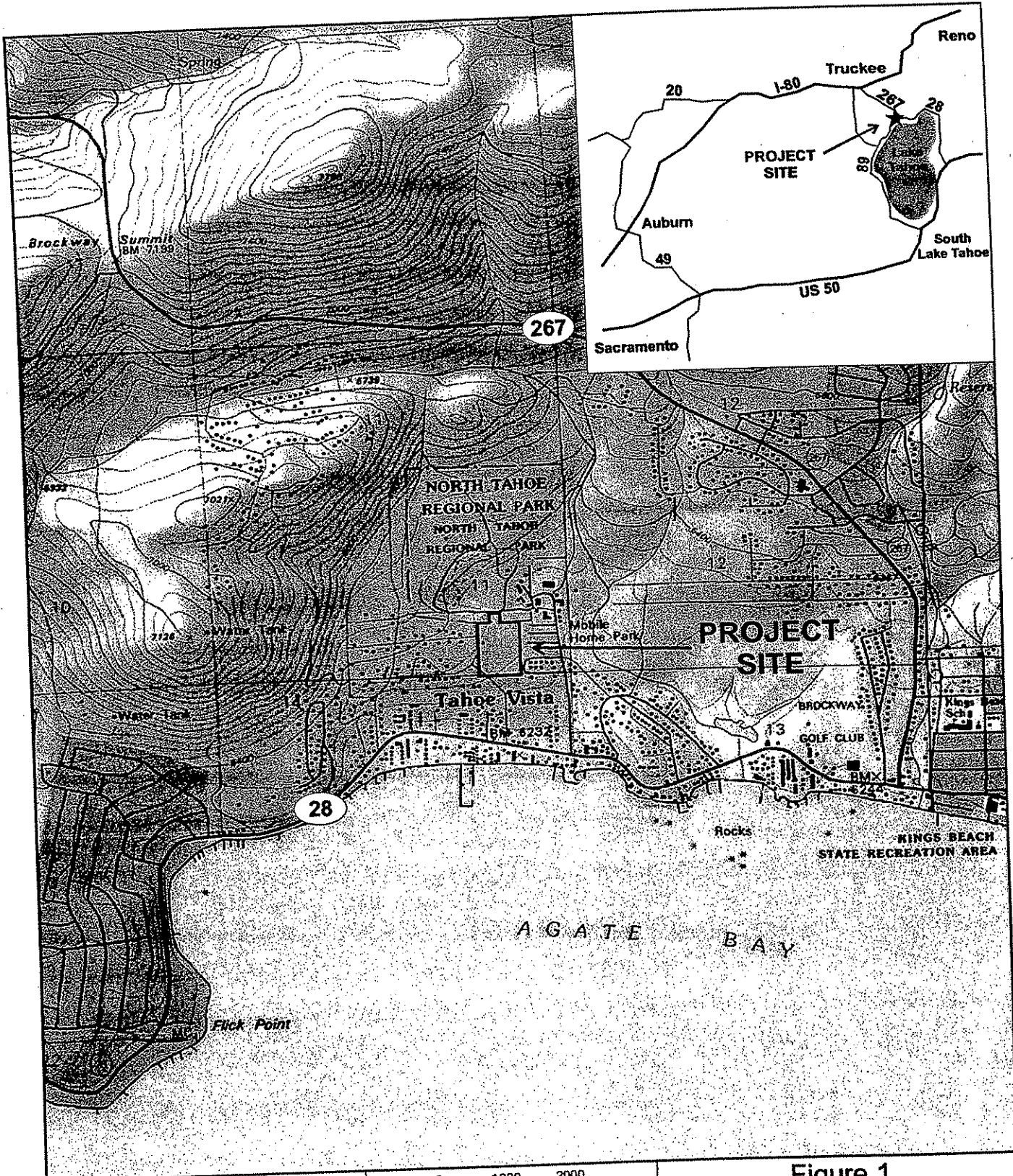
- Identify and describe the biological communities present on the project site
- Record plant and animal species observed on the project site
- Evaluate and identify sensitive resources and special-status plant and animal species that could be affected by project activities

## METHODS

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### Literature Review

The following publications were reviewed to provide information on life history, habitat requirements, distribution, and conservation status of regionally occurring plant and animal species: *Jepson Manual*; *Higher Plants of California* (Hickman 1993), *California Vegetation* (Holland and Keil 1995), *A Field Guide to Western Reptiles and Amphibians* (Stebbins 1985), *A Field Guide to the Birds of North America* (National Geographic Society 1999), and *Mammals of the Pacific States*



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0 1000 2000  
Approximate scale in feet



Basemap: King's Beach, CA USGS  
7.5 minute topographic quadrangle

Figure 1

## SITE AND VICINITY MAP Cedar Grove Apartments

Tahoe Vista  
Placer County, California

(Ingles 1965). Information on soils and geology was taken from the *Soil Survey, Tahoe Basin Area, California and Nevada* (USDA 1974) and the *Geologic Map of California, Chico Sheet - Scale 1:250000* (California Division of Mines and Geology 1962). In addition, the Conservation chapter of the Tahoe Regional Planning Agency's *Goals and Policies* (TRPA 1986) was also reviewed.

### **Special Status Species Reports**

The California Department of Fish and Game's Natural Diversity Data Base (NDDDB)(July 2002) contains records of reported occurrences of rare native species and unique natural communities. Legal status, observation dates, locations, habitats, ecological descriptions, and population data are available through the database. Prior to the field assessment, the NDDDB was queried for any reported occurrences of special status species within the King's Beach, Tahoe City, Martis Peak, and Truckee, California 7.5-minute USGS topographic quadrangles. In addition, a list of federal special status species that may be affected by projects within the Lake Tahoe Basin provided by the Sacramento Branch of the United States Fish and Wildlife Service (USFWS 2002) was also reviewed.

### **Field Assessment**

The field assessment was conducted by Jeff Glazner, Barry Anderson, and Dan Duncanson on October 17, 2002. Information regarding sensitive biological communities and resources was recorded on topographical survey information provided by K.B. Foster, Inc. In addition, digital photographs of the area were taken and representative ones have been included with this report (Figure 3).

## **RESULTS**

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### **Soils**

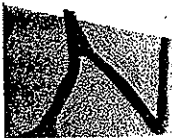
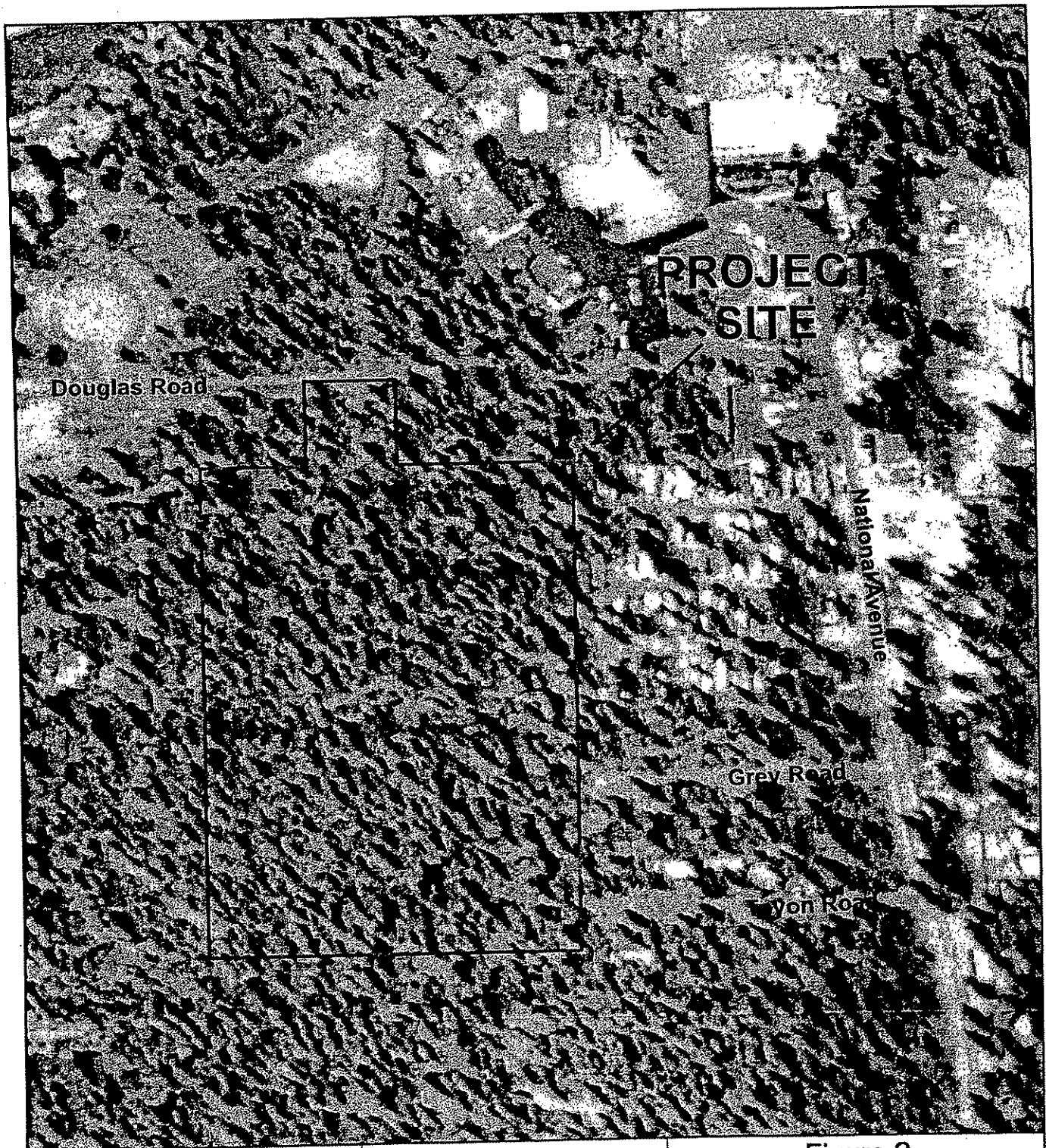
Soils on the site are derived from Pliocene volcanic rock (California Division of Mines and Geology 1962). The only soil unit mapped is Jorge-Tahoma very stony sandy loam, 2 to 15 percent slopes (USDA 1974). The Jorge and Tahoma series are well drained with moderate subsurface permeability. Neither soil is on the National List of Hydric Soils.

### **Hydrology**

The project site has no hydrological features such as streams or ponds. Water may flow over the site, but not in sufficient amounts or in sufficient force to create channels with a defined bed and bank. No areas that could be characterized as wetlands were found on the site.

### **Biological Communities**

The biological community in this report is characterized according to Holland and Keil (1995). Plant species names follow *The Jepson Manual* (1993). Most amphibian, reptile, and mammal species are secretive and rarely observed. However, where species or their sign were seen, they were recorded. Birds make up most of the species seen, and bird nomenclature follows the



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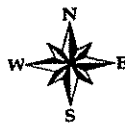


Image not to scale

Figure 2

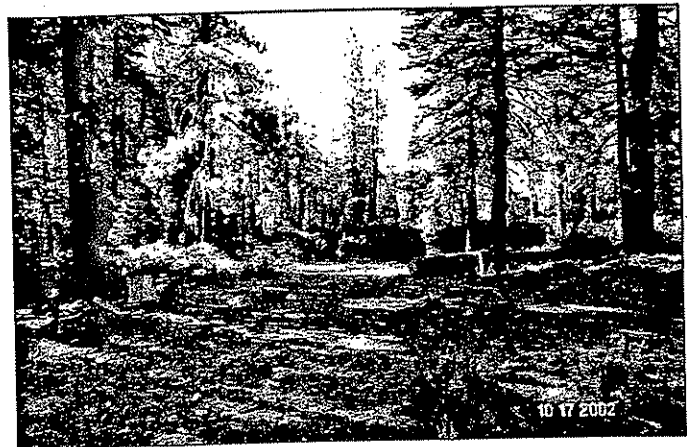
**AERIAL PHOTO**  
*Cedar Grove Apartments*

Tahoe Vista  
Placer County, California

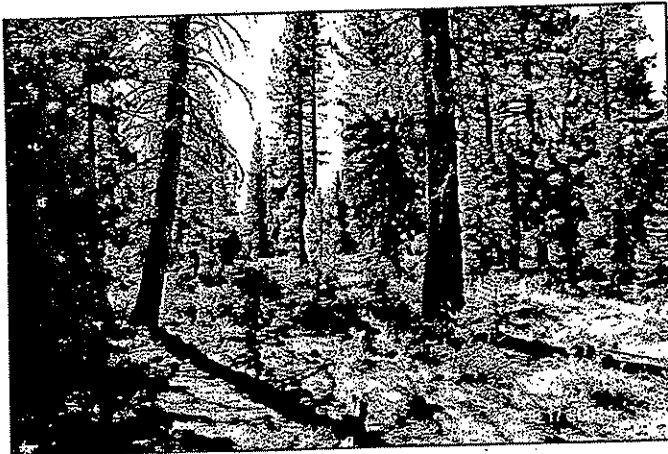




Looking west from west edge  
of property at Grey Lane.



Opening in montane mixed  
conifer forest in project area.



Opening with snags and young  
trees in project area.

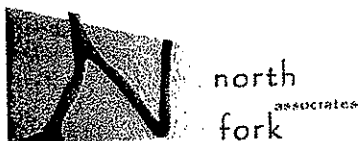


Figure 3

**SITE PHOTOS**  
***Cedar Grove Apartments***

Tahoe Vista  
Placer County, California

A.O.U. Check-list of North American Birds (1998). Lists of plant and wildlife species observed on the project site are included in this report as Appendices A and B, respectively.

### Vegetation

Only one biological community occurs on the site. Vegetation consists of a white fir/Jeffrey pine phase of montane mixed conifer forest. White fir (*Abies concolor*) and Jeffrey pine (*Pinus jeffreyi*) are about equally distributed throughout the site. Other tree species are present in much smaller amounts, including incense cedar (*Calocedrus decurrens*), ponderosa pine (*Pinus ponderosa*), and sugar pine (*Pinus lambertiana*). Ponderosa pines grow in clusters, primarily on the northwest portion of the site. Only a few small sugar pines are present on the property, but one large sugar pine is located in the road corridor connecting the property with Donner Road. Incense cedar are widely scattered on the property but several large cedars, and one very large snag, grow in the northwest portion. None of the trees appear to be old growth and trees of various size classes are evident.

In a few places, the understory is open and consists primarily of herbaceous species. Most of the site, however, has a woody understory. Green leaf manzanita (*Arctostaphylos patula*) is the most common species, but other species include snowberry (*Symphoricarpos rotundifolius*), pinemat manzanita (*Arctostaphylos nevadensis*), mountain white thorn (*Ceanothus cordulatus*), tobacco brush (*Ceanothus velutinus*), mahala mat (*Ceanothus prostrates*), service berry (*Amelanchier* sp.), and antelope brush (*Purshia tridentate*). Scouler's willow (*Salix scouleriana*) grows at scattered locations. While most willows prefer wetlands and riparian habitats, Scouler's willow is one species that is often associated with drier upland montane forests.

### Wildlife

The array of fir, pine, and cedar in montane coniferous forests are utilized for their seeds, insects, and cover. Many snags throughout the project site provide excellent nesting and food resources for birds of prey, woodpeckers, and insectivorous birds. Many burrows of various sizes are also located throughout the project site. In general, the project site contains suitable habitat for a variety of wildlife adapted to disturbance, primarily small birds and mammals. Examples of significant disturbances in the area include nearby National Avenue, which is home to several loud commercial businesses, and several loose dogs in the area, which prevent many animals from living in the area. Dominant wildlife observed on the project site consists of Steller's jay (*Cyanocitta stelleri*), mountain chickadee (*Poecile gambeli*), northern flicker (*Colaptes auratus*), and yellow pine chipmunk (*Tamias amoenus*). Other species observed include mourning dove (*Zenaidura macroura*), hairy woodpecker (*Picoides villosus*), Clark's nutcracker (*Nucifraga columbiana*), Townsend's solitaire (*Myadestes townsendi*), spotted towhee (*Pipilo maculatus*), white-breasted nuthatch (*Sitta carolinensis*), dark-eyed junco (*Junco hyemalis*), golden-crowned kinglet (*Regulus satrapa*), and Douglas' squirrel (*Tamiasciurus douglasii*).

### Special Status Species Assessment

For the purposes of this report, special status species are those that fall into one or more of the following categories:

- listed as endangered or threatened under the federal Endangered Species Act (or formally proposed for listing),
- Listed as endangered or threatened under the California Endangered Species Act (or proposed for listing),
- designated as rare, protected, or fully protected pursuant to California Fish and Game Code,
- designated as a Species of Management Concern by the U.S. Fish and Wildlife Service (USFWS),
- defined as rare or endangered under the California Environmental Quality Act (CEQA), or
- considered to be rare, threatened, or endangered (List 1 and 2) by the California Native Plant Society (CNPS).

The Natural Diversity Data Base (NDDB) reported 24 special status species within the project vicinity queried. This list includes 14 special status plant species and 10 special status wildlife species. Three additional wildlife and one plant species were added to the assessment from a list provided by USFWS (2002). Of these 28 species, 8 have low potential to occur on the project site. These 8 species are listed below, followed by a discussion of each species. All 28 special status plant and wildlife species are listed in Appendices C and D, respectively.

**Table 1: Special Status Species with Potential to Occur in the Project Area**

Species	Federal	State	CNPS	Habitat	Potential for Occurrence
<b>Plants</b>					
<b>Carson Range rock cress</b> <i>Arabis rigidissima demota</i>	FSC	none	1B	Mixed coniferous forest with granitic rock outcrops	Low. No significant rock outcrops on project site.
<b>Pleasant Valley mariposa lily</b> <i>Calochortus clavatus avius</i>	FSC	none	1B	Lower montane coniferous forest on Josephine silt loam or volcanic soil.	Low. Suitable soils occur on the site, but the species is not known to occur in Placer County.
<b>Donner Pass buckwheat</b> <i>Eriogonum umbellatum torreyanum</i>	none	none	1B	Coniferous forest with meadows or rock outcrops	Low. No significant rock outcrops on project site.
<b>Woolly violet</b> <i>Viola tomentosa</i>	none	none	4	Lower montane coniferous forest.	Low. Suitable habitat occurs on the site.
<b>Birds</b>					
<b>American Peregrine Falcon</b> <i>Falco peregrinus anatum</i>	MNBMC DL	CE	—	Cliffs, ridges and rocky promontories	Low. Marginal habitat occurs on site. Local disturbances make species less likely.
<b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i>	MNBMC FT	CE	—	Large trees close to lakes and large rivers, away from human disturbance	Low. Marginal habitat occurs on site. Local disturbances make species less likely.

California Spotted Owl <i>Strix occidentalis occidentalis</i>	MNBMC FSC	none		Mixed conifer forest with multi-storied structure and dense canopy	Low. Marginal habitat occurs on site. Local disturbances make species less likely.
Northern Goshawk <i>Accipiter gentilis</i>	MNBMC FSC	CSC	—	Mixed conifers and deciduous forests with dense canopies	Low. Marginal habitat occurs on site. Local disturbances make species less likely.

Federal: MNBMC = Migratory Nongame Bird of Management Concern (USFWS)  
DL = Delisted, will be monitored for 5 years FT = Federal Threatened species  
FSC = Federal Species of Concern  
State CE = State Endangered species CSC = California Species of Concern  
CNPS 1B = Rare or threatened in California and elsewhere 4 = Plants of limited distribution

The "Potential for Occurrence" column in Table 1 may be defined as follows:

- **Low Potential** – The project site and/or the immediate adjoining area contains low quality or marginal habitat for a given species. Potential may also be considered low if the organism is rare in the region even though suitable habitat exists on site.
- **Moderate Potential** – The project site and/or the immediate adjoining area contains habitat suitable for a given species. Potential is also considered moderate if a particular species is observed on site even though the habitat conditions are less the ideal.
- **High Potential** – The project site and/or immediate adjoining area contains excellent habitat and the species in question is known to occur in the area or has been observed on site during field evaluations.

## Plants

Of the seven taxa in Appendix C, only two have suitable habitat on the site. These are discussed in slightly more detail.

**Carson Range rock cress** (*Arabis rigidissima demota*) is a low perennial member of the mustard family. This species is a federal species of concern and is on the California Native Plant Society List 1B. However, it was not included in the recent revision of the Jepson Manual (Hickman 1993). In California, Carson Range rock cress is known to occur at only two locations, both near Martis Peak. It prefers rocky outcrops in montane forests. Although shallow soil and rocks are common on the Cedar Grove site, no substantial rock outcrops are present. Marginal habitat for the species is present. The only member of the genus *Arabis* observed during surveys was *Arabis holboellii*, which was observed at several locations on the property.

**Pleasant Valley mariposa lily** (*Calochortus clavatus avius*) is a bulbaceous member of the lily family, having federal species of concern and California Native Plant Society List 1B status. The species prefers Josephine silt loam and volcanic soils. Although the site has volcanic soils, which are common in the Tahoe Basin, the species is not known to occur in Placer County. The surveys were conducted beyond the blooming time for Pleasant Valley mariposa lily, but the stems and seedpods of mariposa lilies remain for some time after the current year's above ground growth dies. No evidence of the genus *Calochortus* were observed during field surveys.

Donner Pass buckwheat (*Eriogonum umbellatum torreyanum*) is a federal species of concern and is on the California Native Plant Society List 1B. It is differentiated from other subspecies in the area by its hairless leaves. This species also prefers open rocky outcrops in montane forests. Marginal habitat for it occurs on the site, but no perennial buckwheats were observed during surveys.

Woolly violet (*Viola tomentosa*) is a perennial member of the violet family. It has no state or federal status, but is on the California Native Plant Society List 4, which is a watch list. This violet has densely hairy leaves that distinguish it from other species. In addition, it blooms rather late in the year, unlike many violets that bloom in the spring. Woolly violet would have been evident, at least in a vegetative state, during field surveys, and no violets were observed.

### Wildlife

Thirteen special status wildlife species were determined to have little or no potential to occur on the project site. Primary reasons for this include lack of habitat and high levels of disturbance. If special status wildlife species were to occur in the area, they would likely use other lands for their primary use and the project site as an outlying foraging area. Four species with low potential to occur on site are discussed below.

The American peregrine falcon (*Falco peregrinus anatum*) has been removed from the federal list of threatened and endangered species but is still considered an endangered species in California. Historically, peregrines were found throughout the Sierra Nevada wherever suitable habitat occurred. They nest on cliffs, ridges, and rocky promontories near wet areas from which they hunt their avian prey, primarily waterfowl and shorebirds. No occurrences for the species were reported in the four-quad NDDB search. The probability of this species occurring on site is low due to the high level of disturbance in the area and lack of suitable nesting locations.

The bald eagle (*Haliaeetus leucocephalus*) is listed as threatened by USFWS and by CDFG. This species both nests and winters in the Sierra Nevada. They require large trees for nesting, away from human disturbance and close to large bodies of water that provide their principal prey, large fish and waterfowl. The NDDB reported no occurrences of this species in the four-quadrangle search. Although there are suitable resources for the species in the area, the high level of disturbance near the project site most likely precludes its occurrence.

The California spotted owl (*Strix occidentalis occidentalis*) is a federal species of concern. The species can be found in mixed coniferous forests characterized by dense canopy closure with medium to large tree stands and multi-storied structure. The NDDB reported no occurrences of this species in the four-quadrangle search. Although the species may use the area for foraging, the probability of nesting on site is low due to the lack of dense canopy coverage and the high level of disturbance in the area.

Northern goshawks (*Accipiter gentilis*) are considered a species of concern by USFWS and CDFG. Northern goshawks are year-round residents in the Sierra Nevada, where they prey on forest birds and small mammals. They prefer older aged coniferous, mixed, and deciduous woodlands with large trees and at least 70 percent canopy cover for nesting. They forage both in densely forested areas and open meadows within a forest. The NDDB reported five

occurrences of this species in the project vicinity, the closest one being approximately 3.5 miles to the north. The site contains marginal habitat for northern goshawk due to the lack of dense canopy coverage and high level of disturbance in the area.

In addition, forest carnivores, such as California wolverine (*Gulo gulo luteus*), pine marten (*Martes americana*), and Sierra Nevada red fox (*Vulpes vulpes necator*), also occur within the four quadrangles searched. Although these species may forage on site and use it as a movement corridor, the likelihood of denning on site is low due to the disturbances of people and dogs in the area. They are more likely to den in less human influenced areas.

Nesting raptors are protected by the Migratory Bird Treaty Acts and by California Department of Fish and Game Codes. If construction is planned during the nesting season (March-September), a pre-construction nesting raptor survey should be conducted within 30 days prior to commencement of grading activities.

## CONCLUSIONS

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North Fork Associates has conducted a biological resources assessment for the ±12.5-acre Cedar Grove Apartments, located in Tahoe Vista, Placer County, California. The entire site is made up of montane coniferous forest, dominant trees being white fir and Jeffery pine. No wetlands or waters of the U.S. occur on the project site.

There is a low probability for the occurrence of 8 special status plant and wildlife species. Four of the species are special status plants. Although suitable or marginally suitable habitat was identified for these four species, none were observed during field surveys. Even though field surveys were conducted late in the year, it is likely that the remnants of these species would have been recognizable at that time. Nevertheless, additional spring surveys may be requested by the California Department of Fish and Game or Placer County. Four of the species are special status wildlife species. Although suitable habitat occurs on site, the high levels of disturbance most likely preclude these species from occurring in the area.

Further recommended surveys include a pre-construction nesting raptor survey if construction is planned during the nesting season (March-September) to comply with the California Fish and Game Code. Additionally, a return spring/early summer floristic survey is recommended to increase knowledge of the herbaceous vegetation on the site, and to provide adequate special status species coverage.

## REFERENCES

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## Appendix A

### Plant Species Observed on the Project Site, October 2002

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#### Gymnosperms

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##### Cupressaceae

*Calocedrus decurrens*

Incense cedar

##### Pinaceae

*Abies concolor*

White fir

*Pinus jeffreyi*

Jeffrey pine

*Pinus lambertiana*

Sugar pine

*Pinus ponderosa*

Pacific ponderosa pine

#### Angiosperms - Dicots

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##### Apocynaceae

*Apocynum androsaemifolium*

Bitter dogbane

##### Asteraceae

*Achillea millefolium*

Yarrow

##### Brassicaceae

*Arabis holboellii*

Holboell's rock cress

##### Caprifoliaceae

*Symphoricarpos rotundifolius rotundifolius*

Mountain snowberry

##### Ericaceae

*Arctostaphylos nevadensis*

Pinemat manzanita

*Arctostaphylos patula*

Greenleaf manzanita

*Pterospora andromedea*

Pinedrops

##### Fagaceae

*Quercus vaccinifolia*

Huckleberry oak

##### Polemoniaceae

*Collomia grandiflora*

Collomia

*Navarretia sp.*

Navarretia

*Phlox diffusa*

Phlox

##### Rhamnaceae

*Ceanothus cordulatus*

Mountain whitethorn

*Ceanothus prostratus*

Mahala mat

*Ceanothus velutinus velutinus*

Tobacco brush

##### Rosaceae

*Amelanchier sp.*

Western serviceberry

*Purshia tridentata tridentata*

Antelope bush

##### Salicaceae

*Salix scouleriana*

Scouler's willow



### Scrophulariaceae

*Cordylanthus tenuis tenuis*  
*Penstemon sp.*

Bird's-beak  
Beardtongue

### Viscaceae

*Arceuthobium abietinum*

Fir dwarf mistletoe

## Angiosperms - Monocots

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### Cyperaceae

*Carex sp.*

Sedge

### Poaceae

*Elymus elymoides*  
*Elymus glaucus*

Squirreltail  
Blue wildrye

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**Appendix B**  
**Wildlife Species Observed on the Project Site, October 2002**

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**Birds**

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Mourning dove	<i>Zenaida macroura</i>
Hairy woodpecker	<i>Picoides villosus</i>
Northern flicker	<i>Colaptes auratus</i>
Steller's jay	<i>Cyanocitta stelleri</i>
Clark's nutcracker	<i>Nucifraga columbiana</i>
Mountain chickadee	<i>Poecile gambeli</i>
Red-breasted nuthatch	<i>Sitta canadensis</i>
White-breasted nuthatch	<i>Sitta carolinensis</i>
Golden-crowned kinglet	<i>Regulus satrapa</i>
Townsend's solitaire	<i>Myadestes townsendi</i>
Yellow-rumped warbler	<i>Dendroica coronata</i>
Spotted towhee	<i>Pipilo maculatus</i>
Dark-eyed junco	<i>Junco hyemalis</i>
Black-headed grosbeak	<i>Pheucticus melanocephalus</i>

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**Mammals**

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Yellow-pine chipmunk	<i>Tamias amoenus</i>
Douglas' squirrel	<i>Tamiasciurus douglasii</i>

# Appendix C

## Special Status Plant Species with Potential to Occur in the Project Vicinity

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
<b>Brassicaceae</b> <i>Arabis rigidissima demota</i> Carson Range rock cress	Fed: FSC State: - CNPS: List 1B	August-August	Broad-leaved upland forest; upper montane coniferous forest; [rocky],	One mile SE of Martis Peak.	Low. Marginal habitat occurs on the site.
<i>Draba asterophora macrocarpa</i> Cup Lake draba	Fed: FSC State: - CNPS: List 1B	July-July	Subalpine coniferous forest (rocky).	Occurs in the Tahoe Basin.	None. No suitable habitat occurs on the project site.
<i>Rorippa subumbellata</i> Tahoe yellow cress	Fed: FC State: CE CNPS: List 1B	June-September	Lower montane coniferous forest; meadows; [decomposed granitic beaches].	Between Sandy Beach and Agate Bay.	None. No suitable habitat occurs on the project site.
<b>Hydrophyllaceae</b> <i>Phacelia stebbinsi</i> Stebbins' phacelia	Fed: FSC State: - CNPS: List 1B	June-July	Cismontane woodland; lower montane coniferous forest; meadows and seeps.	Occurs in the Tahoe Basin.	None. No suitable habitat occurs on the project site.
<b>Lamiaceae</b> <i>Scutellaria galericulata</i> Marsh skullcap	Fed: - State: - CNPS: List 2	June-September	Lower montane coniferous forest; meadows (mesic); marshes and swamps.	Occurs on the CNPS list for the area.	None. No suitable habitat occurs on the project site.
<b>Liliaceae</b> <i>Calochortus clavatus avius</i> Pleasant Valley mariposa lily	Fed: FSC State: - CNPS: List 1B	May-July	Lower montane coniferous forest (Josephine silt loam and volcanic).	Occurs in the Tahoe Basin.	Low. Suitable soils occur on site, but the species is not known to occur in Placer County.

# Appendix C

## Special Status Plant Species with Potential to Occur in the Project Vicinity

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
<b>Malvaceae</b> <i>Sphaeralcea munroana</i> Munroe's desert mallow	Fed: - State: - CNPS: List 2	May-June	Great Basin scrub.	Historical records from the slopes above Squaw Creek.	None. No suitable habitat occurs on the project site.
<b>Onagraceae</b> <i>Epilobium oreganum</i> Oregon fireweed	Fed: FSC State: - CNPS: List 1B	June-August	Bogs and fens; lower montane coniferous forest; [mesic].	Occurs in the Tahoe Basin.	None. No suitable habitat occurs on the project site.
<b>Poaceae</b> <i>Glyceria grandis</i> American mannagrass	Fed: - State: - CNPS: List 2	June-August	Bogs and fens; meadows; marshes and swamps (streambanks and lake margins).	Historical record from Squaw Creek.	None. No suitable habitat occurs on the project site.
<b>Polygonaceae</b> <i>Eriogonum umbellatum torreyanum</i> Donner Pass buckwheat	Fed: FSC State: - CNPS: List 1B	July-September	Meadows; upper montane coniferous forest; [volcanic].	Vicinity of Squaw Creek.	Low. Marginal habitat occurs on the site.
<b>Portulacaceae</b> <i>Lewisia longipetala</i> Long-petaled lewisia	Fed: FSC State: - CNPS: List 1B	July-August	Alpine boulder or rock; subalpine coniferous forest (mesic, rocky/granitic).	Occurs in the Tahoe Basin.	None. No suitable habitat occurs on the project site.
<b>Lewisia serrata</b> Saw-toothed lewisia	Fed: FSC State: - CNPS: List 1B	May-June	Broad-leaved upland forest; lower montane coniferous forest; riparian forest.	Occurs in the Tahoe Basin.	None. No suitable habitat occurs on the project site.

## Appendix C

### Special Status Plant Species with Potential to Occur in the Project Vicinity

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
<b>Rosaceae</b> <i>Ivesia sericolenca</i> Plumas ivesia	Fed: FSC State: - CNPS: List 1B	May-September	Great Basin scrub; lower montane coniferous forest; meadows and seeps; vernal pools; [vernally mesic, usually volcanic].	Near the Truckee Airport, Martis Valley.	None. No suitable habitat occurs on the project site.
<b>Violaceae</b> <i>Viola tomentosa</i> Woolly violet	Fed: - State: - CNPS: List 4	May-October	Lower montane coniferous forest; upper montane coniferous forest; subalpine coniferous forest; [gravelly].	Occurs in the Tahoe Basin.	Low. Suitable habitat exists on the site.

#### \*Status

Federal:  
FE - Federal Endangered  
FT - Federal Threatened  
FPE - Federal Proposed Endangered  
FPT - Federal Proposed Threatened  
FC - Federal Candidate  
FSC - Federal Species of Concern

State:  
CE - California Endangered  
CT - California Threatened  
CR - California Rare  
CC - California Candidate  
CSC - California Species of Special Concern

#### CNPS:

List 1A - Extinct  
List 1B - Plants rare, threatened, or endangered in California and elsewhere  
List 2 - Plants rare, threatened, or endangered in California, more common elsewhere  
List 3 - Plants about which more information is needed, a review list  
List 4 - Plants of limited distribution, a watch list

# Appendix D Special Status Wildlife Species with Potential to Occur in Project Vicinity

	Status*	Habitat	Area Locations	Probability on Project Site
<b>Insects</b>				
Lake Tahoe benthic stonefly <i>Capnia lacustra</i>	Fed: FSC State: Other:	Found in Lake Tahoe at depths between 95-400 feet	1 occurrence in Tahoe City quad	None. Lake Tahoe located approximately 1500 feet south of project site.
<b>Fish</b>				
Lahontan cutthroat trout <i>Oncorhynchus clarkii henshawi</i>	Fed: FT State: Other:	Historically found in all cold waters of the Lahontan Basin	3 occurrences in Martis Peak quad 1 occurrence in Tahoe City quad	None. No suitable habitat occurs on site.
<b>Amphibians</b>				
Mountain yellow-legged frog <i>Rana muscosa</i>	Fed: FPE State: CSC Other: FSC	Proposed federal listing is for Southern California only. Found above 5000 feet in the Sierra Nevada and above 1200 feet in So. Cal. Mountains. Always near water; requires two years to complete development.	2 occurrences in Tahoe City quad 1 occurrence in Martis Peak quad	None. No suitable habitat occurs on site.
<b>Birds</b>				
Bald eagle <i>Haliaeetus leucocephalus</i>	Fed: FPD State: FE Other: *	Occurs along shorelines, lake margins, and rivers. Nests in large, old-growth or dominant trees with open branches.	Found throughout Central Valley and Sierra Nevada	Low. Marginal habitat occurs on site but high level of disturbance may preclude species.

# Appendix D

## Special Status Wildlife Species with Potential to Occur in Project Vicinity

	Status*	Habitat	Area Locations	Probability on Project Site
Northern goshawk <i>Accipiter gentilis</i>	Fed: FSC State: CSC Other:	Dense, mature coniferous and deciduous forests interspersed with open areas	1 occurrence in Tahoe City quad 2 occurrences in Martis Peak quad 2 occurrences in Truckee quad	Low. Marginal habitat occurs on project site but significant disturbance nearby may preclude species.
American peregrine falcon <i>Falco peregrinus anatum</i>	Fed: - State: CE Other: *	Breeds near wetlands, lakes, rivers, or other water. Nests on cliffs, banks, dunes, mounds, and man-made structures.	Found throughout Central Valley and Sierra Nevada	Low. Marginal habitat occurs on site but high level of disturbance may preclude species.
California spotted owl <i>Strix occidentalis occidentalis</i>	Fed: FSC State: CSC Other:	Old-growth conifer and mixed conifer-hardwood forest in coastal and Sierra Nevada ranges	Found throughout Sierra Nevada and Cascade Mountain Range	Low. Marginal habitat occurs on site but high level of disturbance may preclude species
Willow flycatcher <i>Empidonax traillii</i>	Fed: State: CE Other:	Uncommon summer resident in upper elevation montane riparian and wet meadow areas	1 occurrence in Tahoe City quad 1 occurrence in Truckee quad 1 occurrence in Martis Peak quad	None. No riparian habitat occurs on site.
Yellow warbler <i>Dendroica petechia</i>	Fed: - State: CSC Other:	Found in riparian habitats with willows, cottonwoods, sycamores, and alders for nesting and foraging.	1 occurrence in Tahoe City quad 1 occurrence in Truckee quad	None. No riparian habitat occurs on site.

# Appendix D

## Special Status Wildlife Species with Potential to Occur in Project Vicinity

	Status*	Habitat	Area Locations	Probability on Project Site
<b>Mammals</b>				
Sierra Nevada mountain beaver <i>Aplodontia rufa californica</i>	Fed: FSC State: CSC Other:	Dense deciduous trees and shrubs in riparian habitat with abundant sources of water	3 occurrences in Tahoe City quad 3 occurrences in Truckee quad 1 occurrence in Martis Peak quad	None. No riparian habitat occurs on site.
Sierra Nevada red fox <i>Vulpes vulpes necator</i>	Fed: FSC State: CT Other:	Found in a variety of habitats from wet meadows to forested areas.	1 occurrence in Truckee quad	None. Marginal habitat occurs on site but high level of disturbance may preclude species.
American marten <i>Martes americana</i>	Fed: State: CSC Other:	Various mixed conifer forests with more than 40 percent canopy closure.	1 occurrence in King's Beach quad, approximately 1 mile northwest of Carnelian Bay	None. Marginal habitat occurs on site, but high levels of disturbance may preclude species.
California wolverine <i>Gulo gulo luteus</i>	Fed: State: CT Other:	Habitat generally consists of open terrain above the timberline, but has been observed at 1500 feet msl.	1 occurrence in Tahoe City quad	None. No suitable habitat occurs on site and high levels of disturbance may preclude species.



# Appendix D Special Status Wildlife Species with Potential to Occur in Project Vicinity

Status*	Habitat	Area Locations	Probability on Project Site
<p><b>*Status</b></p> <p><b>Federal:</b></p> <p>FE - Federal Endangered</p> <p>FT - Federal Threatened</p> <p>FPE - Federal Proposed Endangered</p> <p>FPT - Federal Proposed Threatened</p> <p>FC - Federal Candidate</p> <p>FPD - Federally Proposed for delisting</p> <p>FSC - Federal Species of Concern</p>	<p><b>State:</b></p> <p>CE - California Endangered</p> <p>CT - California Threatened</p> <p>CR - California Rare</p> <p>CC - California Candidate</p> <p>CSC - California Species of Special Concern</p>	<p><b>Other:</b></p> <p>Some species, particularly birds, have protection under the Migratory Bird Treaty Act. Raptors and their nests are protected by provisions of the California Fish and Game Code. A few species, such as wintering areas of the monarch butterfly, may be protected by policies of the California Department of Fish and Game.</p>	

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**FOREST HEALTH EVALUATION OF THE  
CEDAR GROVE HOUSING PROJECT  
TAHOE VISTA, CALIFORNIA**

**Prepared for:**  
EDAW, Inc.  
2022 J Street  
Sacramento, CA 95814

**Prepared by:**  
Molly Sinnott  
Certified Arborist #WC-0369  
August 5, 2005

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## SUMMARY

EDAW requested that Sinnott Consulting perform a forest health and management assessment on the Cedar Grove Project site in Tahoe Vista, California. An assessment of the parcel found the forest to be in an unmanaged condition with trees in good, fair and poor health as well as many dead trees. Various insects and diseases were identified. Thinning is needed in many of the white fir areas.

## ASSIGNMENT

Per our conversation and e-mail on 07-19-05, Sinnott Consulting will provide the following:

Provide an assessment of the affected environment: overall forest health and forest health assessment, and notable forest resources. Confirm healthy specimen trees recommended to be preserved, particularly 30"+ d.b.h. and incense cedars, but also any other trees of note. Confirm species identification and tree diameter of specimen trees: use the existing tree survey as a map.

Provide an assessment of how forest health could be improved through management: include insect, disease, hazard and thinning recommendations; identify trees recommended for removal if they would improve the health of the forest, contribute to a fire hazard, pose an unacceptable risk to occupied or substantial structures or areas of high human use, or help control an insect or disease outbreak.

## FOREST HEALTH ASSESSMENT

### Site Information

An assessment of the forest health at the Cedar Grove Housing Project is needed for management of the trees on the site. Specimen and large trees will be evaluated and recommended to be saved or removed. Desirable tree species will be identified as well as specific hazard trees.

### Site Examination

The site visit was made July 29 and 30, 2005. The parcel has good species diversity but has been unmanaged. Thinning for health, insects, disease and fire hazard has not been performed. White fir is the dominant species in terms of quantity as well as the number of dead and declining trees. Incense cedar has the tallest and largest diameter trees. Ponderosa and sugar pines are identified on the map. All other pines are Jeffrey pines. There are large trees over 25" d.b.h. throughout the site that will be impacted by the project. All trees over 6" d.b.h. have been assessed. A few trees have been noted that are mislabeled or are missing on the map.

The base of the trees and the main trunks have been evaluated for visible health and structural defects such as decay, cavities, wounds, fungus, insects, disease, etc. The crowns of the trees have been evaluated for health and structure as well as crowding. There are quite a few areas on this site that are overstocked with white fir. Most have dead and/or dying trees in these areas and need at least 50% of the trees removed.

### Notable Forest Resources

Standing dead trees assessed for wildlife habitat potential are the larger size trees. Cedars and pines are preferred because firs tend to rot, decay and fall. Wildlife trees should be made safe by having their height reduced to prevent the tops from breaking off. If the trees are pruned at an angle away from the residences, the cut is often not noticeable.

Shrub oak clumps on the site can be pruned to remove dead wood thus leaving an aesthetically pleasing multi-stemmed small tree. These small trees provide good screening as well as habitat for small birds.

## FOREST HEALTH MANAGEMENT

### Site Information

Once there is development on this site there will then be targets. A target is defined as someone or something that can possibly be affected by tree failure such as a broken branch or a falling tree. Three of the tree removal recommendations listed in the tree survey (p. 6-7) are being made only if a target such as a structure, parking lot, play area, sidewalk, etc. is developed within the vicinity of the tree. If there is not a target, the tree can remain. A tree is not a hazard until there is a target.

### Site Examination

Where the tree stand is overstocked, thinning will help reduce the fire hazard. The majority of overstocked areas are white fir trees which need at least 50% of the trees removed. A couple of small fir trees have poor structure, they are bent horizontal from heavy snow loads.

In the northeast section of the parcel dwarf mistletoe, *Arceuthobium abietinum concoloris*, has infected many of the small fir trees and a few of the large firs. The small fir trees infected with mistletoe should be removed; the large firs should have infected limbs removed. Bacterial wetwood disease is also infecting a number of the declining fir trees.

There are fir engraver beetles, *Scolytus ventralis*, infesting the typical overstocked, declining white fir tree areas, particularly in the northeast section. This is evident by the clear pitch streaming down from the top on the main stem. The beetle infested white fir trees that appear green but have pitch streaming down the trunk need to be removed to prevent the beetles from emerging next season.

A large burl was noted at the base of a ponderosa pine, an oddity with unknown cause, not a health problem. Sapsucker bird injury (elliptical holes drilled in a horizontal or vertical pattern) was detected on two pine trees, normally not detrimental to the tree. Woodpecker damage was seen on numerous dead fir tree trunks.

The majority of large cedar trees have the typical fire burn damage at the base. Some of the damage is severe and has allowed for a hollow cavity at the base of the tree. Existing wildlife trees are larger fir, cedar and pine.

## CONCLUSIONS

It is my professional judgement that the site needs to be thinned. This will reduce the competition of the remaining trees for water and nutrients as well as reduce the fire hazard. Thinning will reduce and help control insect and disease problems. It will remove the hazard of standing dead trees. With proper management, the trees saved will be an asset to the property as well as the neighborhood. They will reduce the amount of new landscaping needed to provide shade, screening and aesthetics which increases property values.<sup>1</sup>

## RECOMMENDATIONS

1. Have the entire site marked for thinning to reduce the fire hazard and improve the health of the remaining trees.
2. Remove the obviously dead and dying trees.
3. Remove the trees noted as hazards as well as the horizontal snow load trees.
4. Reduce the height of wildlife trees to reduce the hazard potential of tops breaking off. Make the pruning cut at an angle away from residences for aesthetic purposes.
5. Prune the multi-stemmed shrub oaks to clean out dead wood.
6. Remove the beetle infested fir trees that are still green.
7. Remove at least 50% of the fir trees where they are overstocked.
8. Remove the mistletoe infected small fir trees, prune branches with mistletoe from the large trees. If mistletoe is in the main stem, remove the tree.
9. Use current ANSI<sup>2</sup> Pruning Standards for removal of any limbs.

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<sup>1</sup>Guide for Plant appraisal, pp. 4-5.

<sup>2</sup>American National Standards Institute.

## TREE SPECIES LIST

Genus Species	Common Name
Abies concolor	White Fir
Calocedrus decurrens	Incense Cedar
Pinus jeffreyi	Jeffrey Pine
Pinus lambertiana	Sugar Pine
Pinus ponderosa	Ponderosa Pine
Quercus chrysolepis v. vaccinifolia	Huckleberry Oak



## TREE SURVEY

All trees **not** noted on this survey are recommended to be saved with the exception of white fir clusters.

Tree No.	Species	Size d.b.h.	Health	Structure	Condition 1 = poor 5 = excellent	Preservation Suitability
1	Incense Cedar	60"	Good	Poor - extensive burn scar at base	3	Remove - if target develops
2	Sugar Pine	18"	Good	Poor - three sides of tree with scars	3	Remove - hazard
3	Incense Cedar	66"	Good	Fair - burn scar at base	4	Save
4	Ponderosa Pine	40"	Good	Poor - strong lean to north, seam at base on north side, old wound on west side	2	Remove
5	Ponderosa Pine	36"	Fair - thin crown, burl	Fair - severe lean at codominant stem	3	Remove
6	White Fir	28"	Poor - dead limbs bark beetle	Poor - 3/4 dead main stem	1	Remove
7	White Fir	numerous less than 6"	Poor - mistletoe	Good	2	Remove all infected trees
8	White Fir	30"	Fair - recovering from previous stress	Good	3	Save
9	Wildlife Trees - see table p. 9		Dead	Fair - reduce heights	1	Save - cedars and pine preferably
10	Shrub Oak Trees - see table p. 9		Good	Good	4	Save - prune dead wood
11	Jeffrey Pine - see table p. 8	28"	Good	Good	4	Save

Tree No.	Species	Size d.b.h.	Health	Structure	Condition 1 = poor 5 = excellent	Preservation Suitability
12	White Fir - see table p. 8	8"	Poor	Fair - leaning	2	Remove
13	Ponderosa Pine	24"	Fair - rust disease where heavy top growth begins and leans	Poor - strong lean, top heavy	2	Remove
14	White Fir	30"	Poor - dead top decay in main stem	Fair	2	Remove
15	Jeffrey Pine - see table p. 8	18", 20", 13"	Good	Fair multi-stem base	3	Save
16	White Fir	30"	Fair - rust at base and 1/3 up main stem	Fair	3	Remove - if target develops
17	Jeffrey Pine - see table p. 8	20", 30"	Good	Fair - multi-stem base	3	Save
18	Incense Cedar	60"	Good	Possibly good - wound on southeast side in lower 1/3 of stem needs above ground evaluation	3	Save if evaluation allows
19	White Fir	32"	Good	Fair - leans	3	Remove - if target develops
20	Incense Cedar - see table p. 8	34"	Good	Good	4	Save
21	Incense Cedar - see table p. 8	20"	Fair	Fair	3	Save
22	Jeffrey Pine - see table p. 8	30"	Good	Good	4	Save
23	Ponderosa Pine - see table p. 8	25"	Good	Good	4	Save
24	Sugar Pine - see table p. 8	17"	Good	Good	4	Save

**MISLABELED TREES**

<b>Tree No.</b>	<b>Species</b>	<b>Size d.b.h.</b>	
11	Jeffrey Pine	28"	misabeled as 13" snag
12	White Fir	8"	misabeled as 18" white fir
15	Jeffrey Pine	18", 20", 13"	misabeled as 18" pine
20	Incense Cedar	34"	misabeled as 26" pine
21	Incense Cedar	20"	misabeled as 20" snag

**MISSING TREES**

<b>Tree No.</b>	<b>Species</b>	<b>Size d.b.h.</b>	
17	Jeffrey Pine	20" & 30"	multi-stem
22	Jeffrey Pine	30"	
23	Ponderosa Pine	25"	
24	Sugar Pine	17"	

## NOTABLE FOREST RESOURCES

### Wildlife Trees (standing dead, prefer cedars and pine)

Symbol	Size d.b.h.	Common Name
#9	82"	Incense Cedar
#9	26"	White Fir
#9	36"	Jeffrey Pine
#9	20"	White Fir
#9	24"	White Fir
#9	26"	White Fir
#9	18"	White Fir
#9	28"	Incense Cedar
#9	34"	Incense Cedar

### Shrub Oak Trees

Symbol	Quantity	Size d.b.h.	Common Name
#10	5	Multi-stem clumps	Huckleberry Oak

## GLOSSARY OF TERMS

<b>Burl</b>	Swollen mass of woody tissue.
<b>Callus</b>	Tissue developed due to a wound.
<b>Canopy</b>	Spreading branch layers of a tree.
<b>Cavity</b>	An open wound, characterized by the presence of extensive decay and resulting in a hollow area.
<b>Codominant</b>	Trunks or limbs in the crown that are of equal size and importance.
<b>Crown</b>	Parts of the tree above the trunk, including leaves, branches and scaffold limbs.
<b>Decay</b>	Process of degradation of woody tissues by fungi and bacteria through decomposition of cellulose and lignin.
<b>d.b.h.</b>	Diameter breast height, tree measurement made at 4.5 feet above the ground.
<b>Prune</b>	Removal of live or dead, unwanted growth from a plant.
<b>Seam</b>	Vertical line where woundwood or callus ridge meet on tree trunk, often indicator of a cavity or wound.
<b>Stem</b>	Main trunk of a tree.
<b>Target</b>	People or property potentially affected by tree failure.

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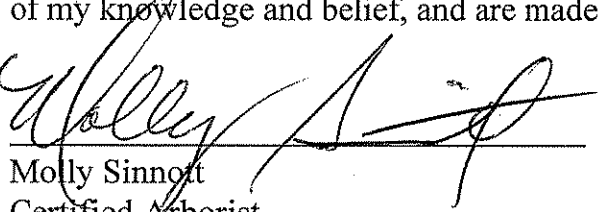
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## ASSUMPTIONS AND LIMITING CONDITIONS

1. Any evidence of property ownership provided to the consultant is assumed to be correct. Any and all property is evaluated as though free and clear.
2. Property is assumed to not be in violation of any applicable codes, ordinances, statutes or other governmental regulations.
3. Care has been taken to obtain all information from reliable sources.
4. The consultant will not give testimony or attend court by reason of this report unless subsequent contractual arrangements are made.
5. Loss or alteration of any part of this report invalidates the entire report.
6. Possession of this report or a copy of this report does not imply right to publish or use for any purpose by anyone other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant.
7. This report represents the opinions of the consultant, and the consultant's fee is in no way contingent upon the reporting of a stipulated result, the occurrence of a subsequent event, nor any finding to be reported.
8. Tables and maps in this report are intended as visual aids and are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.
9. Information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

## CERTIFICATION

I certify that all the statements of fact in this report are true, complete and correct to the best of my knowledge and belief, and are made in good faith.



Molly Sinnott  
Certified Arborist  
#WC-0369

# Acoustical/Visual Survey for Northern goshawks other birds, potential goshawk prey and habitat assessment on the planned 12-acre Cedar Grove Development in Tahoe Vista, Ca.

Date: 28 July 2005

Conducted by: Zach Smith, Ornithologist, Independent consultant

## Findings

A recording of a Northern goshawk was played at four locations on the plot to elicit territorial and/or aggressive responses from potential goshawks in the area. No responses were noted. Other bird species observed/heard are listed below. Several of these are commonly preyed upon by goshawks, but are all locally common throughout the area. A few Douglas squirrels, which form a large percentage of the diet of goshawks in the Tahoe Basin, were present, as were 2 chipmunks, also a common prey item. The presence of Douglas squirrels or other prey is not in itself significant, since the species is ubiquitous throughout the Tahoe Basin. No nest structures or plucking posts (heavily used perches where goshawks will either eat prey or prepare it for delivery to a nest) were noted on the survey. The latter is usually an obvious sign that a nest is/was nearby, told by the presence of droppings and piles of feathers below the post.

In general, the habitat on the plot is unattractive to goshawks for nesting. The species typically requires a higher, more closed canopy and larger trees for nesting. Proximity to human activity is also a major deterrent to goshawk nesting on the site. There is evidence that a decent number of potential prey species utilize the site. Several snags had cavities excavated by woodpeckers, which are fairly commonly preyed upon. This may make the site attractive to goshawks for occasional hunting forays from nearby areas. A goshawk pair successfully produced young this year a short distance north of the site (Victor Lyon, LTBMU, pers. comm.). In addition, several good-sized conifers, including Incense cedars (*Calocedrus decurrens*) and Jeffrey Pines (*Pinus jeffreyi*) were noted, which might be useful as perches to dispersing juveniles or adults moving between patches of more suitable nesting and hunting habitat; a kind of corridor for the birds. The general forest structure and setting seemed more suited to Cooper's hawks (*Accipiter cooperii*), a close relative



of the goshawk. They tend to be more tolerant of human activity (nests are common in people's yards) and of the open forest canopy.

### Recommendations

While the site is of little use to Northern goshawks, conserving a few habitat features on the site can maintain a good portion of the extant bird diversity. The large conifers, live trees and snags, are attractive and provide high perches for a variety of birds, including raptors, woodpeckers, flycatchers and finches. The snags provide good substrate for woodpeckers to excavate nest cavities, which in turn provide nesting opportunities for secondary cavity nesters (birds that don't excavate their own cavity), such as Red and White-breasted nuthatches. The understory of Manzanita and Bitterbrush is attractive to many species, especially the former due to their berries. Leaving decent-sized patches throughout the development will maintain some important cover for ground-dwelling birds such as Fox sparrows and Green-tailed towhees that regularly nest near human activity. The small Willow patches present should also be conserved since they provide insect food for both nesting and migrant songbirds.

### Bird List

Mourning dove	Green-tailed towhee
Hairy woodpecker	Fox sparrow
White-headed woodpecker	Oregon junco
Red-shafted flicker	Brown-headed cowbird
Dusky flycatcher	
Steller's jay	
Clark's nutcracker	
Mountain chickadee	
Red-breasted nuthatch	
White-breasted nuthatch	
Pygmy nuthatch	
Brown creeper	
American robin	
Western tanager	

### Consultant's Background

For the past several years, Zach Smith has been involved with ornithological research and bird population monitoring. He has worked in Yosemite NP and the Lake Tahoe Basin surveying for Northern goshawks, spent several seasons monitoring landbirds for Point Reyes Bird Observatory, and has studied Spotted owls, Snowy plovers and Golden eagles in California and has been involved with raptor banding and monitoring all over the country and in Mexico. He received a B.S. in Zoology from UC Davis in 1994.

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